

EVALUATION OF FACTORS PERTINENT TO COMPLETE DENTURE TREATMENT SATISFACTION AT KING SAUD UNIVERSITY DENTAL COLLEGE'S CLINICS

Huda D. Stipho, BDS, MS* and Ghaida'a Al-Bisher, BDS**

مقدمة

غالباً ما يكون قبول نتائج المعالجة بالتركيبات الصناعية الكاملة مشكلة نهائية، أي أن قبول نجاحها من عدمه لا يظهر إلا عند الانتهاء من هذه المعالجة واستلام المريض التركيبة الجديدة ومحاولته التعايش معها أثناء النطق والمضغ والشراب، لذا فإن أهمية واقع التخطيط الأولي لتوعية المريض بما سيقدم عليه وتفهمه لأسلوب المعالجة وطرق ومراحل تنفيذ هذه المعالجة والنتائج المتوقعة هو أمر مهم جداً في إنجاحها.

إن التهيئة النفسية للمريض بنتائج المعالجة لها تأثير كبير في قبولها ونجاحها في النهاية.

إن العلاقة بين جودة التركيبات الصناعية الكاملة ودرجة نجاحها تعتمد أساساً على مبدأ الراحة التي يحس بها المريض معها، كما أن شكل وحجم التركيبة نفسها ومدى ملائمة الألوان وانسجامها مع بنية المريض واستخدام التركيبات في الأكل والشراب، تعتبر من أهم هذه العوامل المؤثرة في تقبل التركيبات الصناعية.

لقد أكد هذا البحث وصنف إحصائياً توقعات وتصرفات تقبل المعالجة بالتركيبات الصناعية لمائة وأربعين مراجعاً لعيادات كلية طب الأسنان في جامعة الملك سعود بالرياض.

اعتمد هذا البحث مقياساً جديداً لمعايرة قبول المعالجة بالتركيبات الصناعية كأساس لنجاحها عن طريق استبيانين الأول للتقويم الشخصي للمعالجة والثاني إكلينيكي يقوم به أطباء متخصصين في المجال. لقد تم تحليل وربط النتائج ببعضها وبالعلاقات حسابية ومؤشرات إحصائية ثابتة ودرست الاستبيانات وتم مقارنتها ببعضها واستخلاص النتائج منها.

لقد اتضح من هذه الدراسة وجود علاقة حسابية موجبة بين درجة تقبل التركيبات الصناعية الكاملة وجميع مراحل الأعمار التي تم دراستها وبين الجنسين الذكور والإناث.

ولم تظهر أية علاقة إحصائية رئيسية بين درجة تقبل العلاج وعدد المراجعات بين المرضى الجدد أو هؤلاء الذين سبق وأن استلموا علاجاً مشابهاً داخل أو خارج عيادات الكلية.

تبين الجداول والرسومات البيانية المرفقة مستوى درجة تقبل العلاج الحاصلة بين مراحل أعمار المراجعين من الذكور والإناث وضمن مجموعات مراحل الأعمار التي تم دراستها.

عموماً فقد ثبت للباحثين أن درجة نجاح وقبول المعالجة بالتركيبات الصناعية الكاملة وخدماتها المقدمة في عيادات كلية طب الأسنان - جامعة الملك سعود بالرياض، وعلى ضوء التقويم الشخصي والإكلينيكي بأنها مرتفعة وضمن حدود مثيلاتها من الخدمات الطبية العالمية.

Attitude and self-satisfaction towards complete denture treatment was assessed by means of a questionnaire distributed to treated patients. The degree of satisfaction was evaluated after a

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* Assistant Professor, Department of Prosthetic Dental Sciences

** Demonstrator, Department of Prosthetic Dental Sciences,

King Saud University, College of Dentistry, P.O. Box 60169,

Riyadh 11 545, Kingdom of Saudi Arabia.

Address reprint requests to Dr. H.D.Stipho

minimum post-insertion period of three months by assessing various factors that affect denture treatment success and acceptance. One hundred and forty patients were considered, all of whom received complete maxillary and mandibular denture treatments among a large spectrum of patients attending King Saud University dental clinics. The self-expressed degree of satisfaction was correlated with that technically evaluated by the specialists. Moderately positive correlation was found between satisfied patients within all age and sex subgroups. No statistically significant difference was found between the degree of satisfaction among patients having the first denture treatment experience and those who had previous multidenture treatments. In general, significant degree of satisfaction was found in both the self-assessed and clinically assessed examinations among the population examined.

Introduction

Dissatisfaction among patients with complete dentures is not uncommon. They complain about pain, loose dentures, difficulties in speaking and eating, and diminished chewing ability. Often, this occurs despite the fact that the dentist possesses adequate knowledge and technical skills to diagnose and treat the edentulous mouth with the most sophisticated articulators and advanced dental materials at his disposal. Inasmuch as many patients are quite satisfied with dentures that may be considered technically inferior, the causative complaints may not be one of a technical inadequacy.

Researchers have indicated that dissatisfaction in the medical field does exist and dental treatment is no exception. Often, the problem is that the patient was not sufficiently involved in the treatment planning, which resulted in a mismatch between the expectation and perception of the dentist and those of his patient.¹² Upon completion of the denture treatment, 25% of all denture wearers are considered dissatisfied.³⁴ This may be true in some cases because dentures do not fit well; whereas in other cases, it was because of the patient's inability to adapt to the denture. The latter may be due to anatomical or physiological factors⁵⁷ but in some cases, it was more of a psychological nature. It is assumed that some of these psychological factors could be avoided when the patient is actively involved in the treatment whereby cooperation and communication between the patient and dentist are essential.

The purpose of this study was to determine the causes of patient dissatisfaction and to evaluate the quality of dentures among the large spectrum of patients who attended King Saud University (KSU) Dental College's clinics for treatment.

A questionnaire was designed and data were collected from the clinical examination of patients. The data was used to statistically analyze the relative importance, significance and correlation between a number of variables that may constitute the basis for dissatisfactory treatment. An attempt was also made to correlate the relationship among denture quality, patient's socio-economic status, physical condition of the mouth, and patient's satisfaction.

Materials and Methods

One hundred and forty complete denture patients were selected from the records of the KSU College of Dentistry for inclusion in this study. Those selected had maxillary and mandibular dentures made within the previous three years. Of this group, two had died, three had moved, and 15 did not attend the follow-up appointment. The age-range of the 120 patients who formed the basis for this study, was from 35 to 80 years with a mean age of 55.6 years [Fig. 1]. The educational, cultural and environmental backgrounds of these patients varied. The dentures were made by general practitioners, interns and/or prosthodontists at KSU.

All patients were offered the opportunity of having faulty dentures corrected or replaced without cost (no cost is charged at KSU College of Dentistry). Each patient was interviewed, using a questionnaire designed for this study (Table 1), and examined by one of the two investigators including radiographs. A comprehensive clinical examination of the mouth and the prostheses was also made.

Assessment of the dependent variables was grouped and standardized to keep variance at a minimum. The three different aspects considered

Table 1. Questionnaire used in the different assessment procedures.

- a. Socio-economic Background Assessment
 - Patient's name, file number.
 - Sex, age
 - Occupation
 - Number of previous denture treatment experience
 - Type of dentures
 - Treating clinic
- b. Patient Self Assessment (Assessment A)
 - What is your general feeling about your denture?
 - Do you eat and chew well?
 - Do you have pain, problems on biting into food?
 - Do you feel comfortable with your dentures while you are not eating?
 - Are you happy with the general look of your dentures?
 - Are you happy with the color of the teeth of your dentures?
 - Are you happy with the size of the teeth of your dentures?
 - Do your dentures fall out when you open your mouth?
 - Do your dentures bother you when you swallow?
- c. Specialist Technical Assessment (Assessment B)
 - Condition of the residual ridges (upper, lower)
 - Esthetics
 - Phonetic
 - Occlusion
 - Vertical dimension of occlusion
 - Centric occluding relation
 - Denture extension (upper, lower)
 - Denture retention (upper, lower)
 - Denture stability (upper, lower)

were (a) patient's socio- economic background, (b) patient's satisfaction (patient's self-assessment, A) and (c) physical elements (the specialist technical assessment, *B).

Other reasons for denture dissatisfaction, such as tissue reaction to antibiotics and other chemical agents, poor ventilation of the oral mucosa, impatience and nervousness,⁴⁸¹¹ were not considered.

Each of the variables in the questionnaire was measured by indexing the level of acceptance. Three categorical rankings [poor (1), fair (3), and good (5)] were used. These specific rankings were selected to permit smooth distribution of frequencies and broader quantitative statistical analysis.

Results

Patients examined in this study were found to be homogenous in sex and age distribution [Fig. 1]. Of

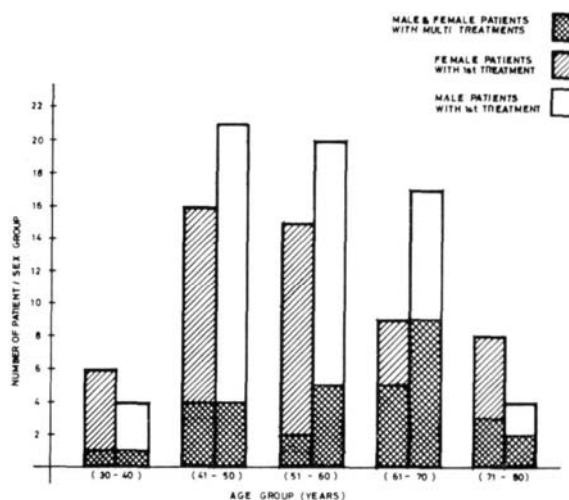


Figure 1. Distribution of patients by age, sex and previous denture treatment experience.

these, 55% of the population were males and 45% were females. Among the male patients, 31.8%

had previous complete denture treatments and 27.8% among the females. Male and female populations who had their first denture treatments were of an age less than the mean age of the investigated population [Fig. 2]. On the basis of the items included in the questionnaire, the variables that were considered to affect denture treatment acceptance were singled out in the patient's self-evaluation (Assessment A) and the dentist technical evaluation (Assessment B). The measure for treatment acceptance was determined by the degree of satisfaction. It was evaluated to include all variables from a numerically balanced index within analytically statistical techniques and presented in percentage. Distributions of the

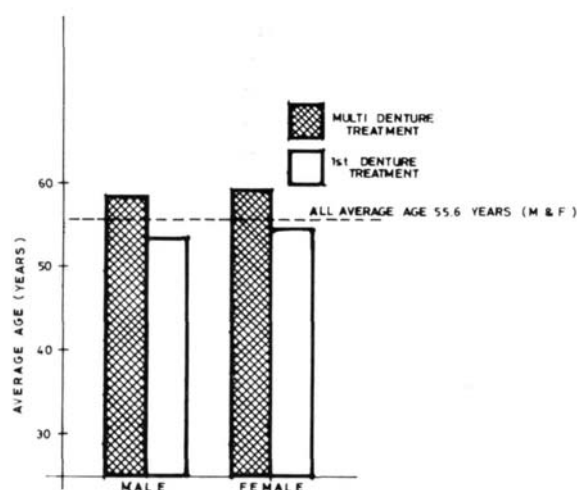


Figure 2. Average age distribution of the population.

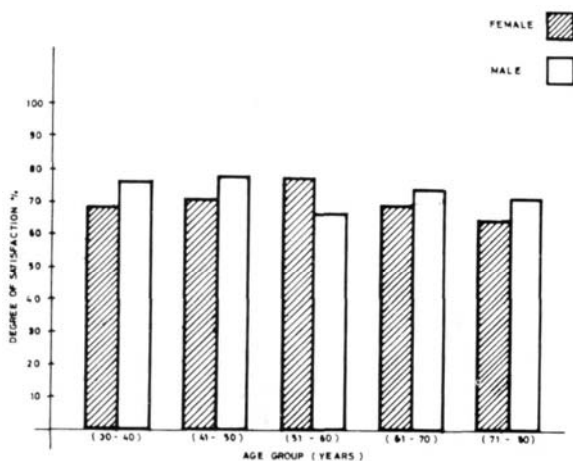


Figure 3. Distribution of the degree of satisfaction by age-group (patient self-assessment, A).

degree of satisfaction within the age sub-groups, for each of the genders as well as based on one of the two assessment procedures are shown in Figures 3 and 4. The degree of satisfaction was found to vary with the age-group and assessment procedure. However, higher denture satisfaction was found in the older patients among the tested population which supported the study of Weinstein *et al.*¹² A significant but low correlation was found between the satisfaction opinion of patients and that of the examiners ($P < 0.0001$). Also, a statistically significant sex differences ($P > 0.05$) in the complete denture treatment satisfaction of all the age sub-groups was found.

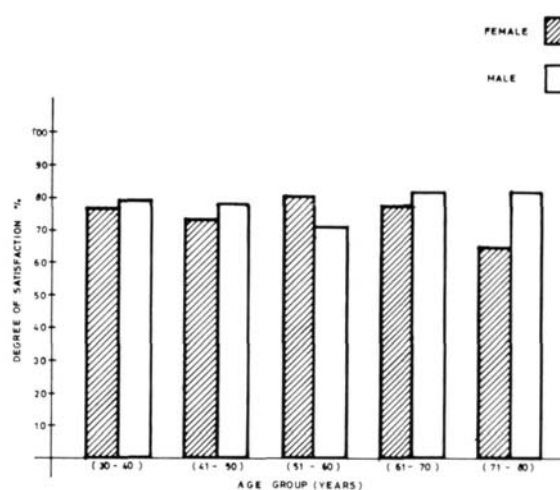


Figure 4. Distribution of the degree of satisfaction by age-group (specialist technical assessment, B).

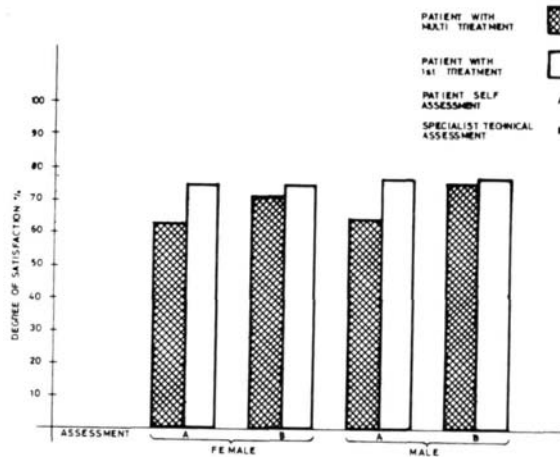


Figure 5. Distribution of the degree of satisfaction by sex, experience of denture treatment and type of assessment.

Discussion

Since dentures are artificial means for replacing missing natural teeth and adjacent tissues, its acceptance is directly related to its function, comfort and appearance.

In order to understand the influence of each of these factors on denture acceptance separately, the data relating the patient's comfort, denture function and denture appearance were singled out and further analyzed. The degree of satisfaction based on each of these elements for 120 patients (both males and females) were separately averaged as presented in Table 2. Moreover, the degree of satisfaction based on the individual elements was found to impart no significant difference apart from that based on the function criterion where male's degree of satisfaction was 86.36% while that for the females was 65.8%.

From the individual standpoint of function, the analyses showed that sex difference does exist in the ability of the patient to adapt and accept denture treatment. The overall degree of satisfaction from self assessment (Table 2) among the male (72.2%) and female (71.7%) sub-groups was found not to be significantly different. Similarly, the quality of denture treatments as technically evaluated (Assessment B) from among all patients, was found to be equivalent irrespective of age and sex.

The lack of mean difference ($P > 0.05$) between the observed degree of satisfaction among patients who had received their first denture treatment and those with multi-treatment experiences may be due to the past experience the latter group might have had outside the University clinics.

The relationship between the quality of dentures and the degree of satisfaction based on comfort and ability of the patient to masticate was found to be highly significant ($P < 0.001$).

The degree of satisfaction as adopted herein was a useful tool for the evaluation of denture treatment satisfaction and the denture treatment services delivered. The ease in converting the data as measures of the observation to numerical values had made these statistical analyses possible. It could be noticed that denture treatments, rated with maximum satisfaction, were those which showed good function ratings in both the male and female subgroups (Table 2). The overall mean degree of satisfaction, as measured by these three factors among all patients examined, was 73.16%. This mean value was slightly less than the internationally anticipated medical treatment acceptance average of 75 %.^{34,12} Although the rate of satisfactory dental treatments at these clinics was found to be high as far as this work is concerned, it could be improved by producing well constructed dentures that attain more comfort, better esthetics and effective mastication.

Table 2. Analysis of the degree of satisfaction as related to the basic denture treatment elements.

Element	Degree of Satisfaction (Males)	Degree of Satisfaction (Females)	Items Tested
Function	86.36%	65.82%	1) General feeling 2) Bite into and chewing of food 3) Speak clearly
Comfort	66.34%	67.49%	1) Denture fitness (upper and lower) 2) Denture comfort while not eating (upper and lower) 3) Lack of gagging
Appearance	79.9%	79.15%	1) General appearance 2) Shape of teeth 3) Shade of teeth
Overall A	72.2%	71.74%	A) Patient self-assessment, and
Satisfaction B	73%	76.1%	B) Specialist technical assessment (details defined in Table 1)
Mean	72.6%	73.94%	

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